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EXAMINER

JONES, DAMERON LEVEST

ART UNIT

PAPER NUMBER

1618

SHORTENED STATUTORY PERIOD OF RESPONSE	MAIL DATE	DELIVERY MODE
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31 DAYS

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PAPER

Please find below and/or attached an Office communication concerning this application or proceeding.

If NO period for reply is specified above, the maximum statutory period will apply and will expire 6 MONTHS from the mailing date of this communication.

Office Action Summary	Application No. 10/800,531	Applicant(s) ACHILEFU ET AL.	
	Examiner D. L. Jones	Art Unit 1618	

-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --
Period for Reply

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 1 MONTH(S) OR THIRTY (30) DAYS, WHICHEVER IS LONGER, FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133). Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

Status

- 1) ☐ Responsive to communication(s) filed on ____.
- 2a) ☐ This action is **FINAL**. 2b) ☐ This action is non-final.
- 3) ☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

Disposition of Claims

- 4) ☒ Claim(s) 1-44 is/are pending in the application.
 4a) Of the above claim(s) ____ is/are withdrawn from consideration.
- 5) ☐ Claim(s) ____ is/are allowed.
- 6) ☐ Claim(s) ____ is/are rejected.
- 7) ☐ Claim(s) ____ is/are objected to.
- 8) ☒ Claim(s) 1-44 are subject to restriction and/or election requirement.

Application Papers

- 9) ☐ The specification is objected to by the Examiner.
- 10) ☐ The drawing(s) filed on ____ is/are: a) ☐ accepted or b) ☐ objected to by the Examiner.
 Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).
 Replacement drawing sheet(s) including the correction is required if the drawing(s) is objected to. See 37 CFR 1.121(d).
- 11) ☐ The oath or declaration is objected to by the Examiner. Note the attached Office Action or form PTO-152.

Priority under 35 U.S.C. § 119

- 12) ☐ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).
 a) ☐ All b) ☐ Some * c) ☐ None of:
1. ☐ Certified copies of the priority documents have been received.
2. ☐ Certified copies of the priority documents have been received in Application No. ____.
3. ☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).
- * See the attached detailed Office action for a list of the certified copies not received.

Attachment(s)

- | | |
|--|---|
| 1) <input type="checkbox"/> Notice of References Cited (PTO-892) | 4) <input type="checkbox"/> Interview Summary (PTO-413)
Paper No(s)/Mail Date. ____. |
| 2) <input type="checkbox"/> Notice of Draftsperson's Patent Drawing Review (PTO-948) | 5) <input type="checkbox"/> Notice of Informal Patent Application |
| 3) <input type="checkbox"/> Information Disclosure Statement(s) (PTO/SB/08)
Paper No(s)/Mail Date ____. | 6) <input type="checkbox"/> Other: ____. |

RESTRICTION INTO GROUPS

1. Restriction to one of the following inventions is required under 35 U.S.C. 121:

Group (1). Claims 1-26 drawn to a method comprising the formula of independent claim 1 wherein **both** W6 and X6 = CR1R2, classified in class 548, subclass 400+.

Group (2). Claims 1 and 4-26 drawn to a method comprising the formula of independent claim 1 wherein W6 = CR1R2 and X6 = oxygen **or** W6 = oxygen and X6 = CR1R2, classified in class 548, subclass 215+.

Group (3). Claims 1, 2, and 4-26 drawn to a method comprising the formula of independent claim 1 wherein W6 = CR1R2 and X6 = NR3 **or** W6 = NR3 and X6 = CR1R2, classified in class 548, subclass 300.1+.

Group (4). Claims 1, 2, and 4-26 drawn to a method comprising the formula of independent claim 1 wherein W6 = CR1R2 and X6 = sulfur **or** W6 = sulfur and X6 = CR1R2, classified in class 548, subclass 146+.

Group (5). Claims 1 and 4-26 drawn to a method comprising the formula of independent claim 1 wherein **both** W6 and X6 = oxygen, classified in class 548, subclass 215+.

Group (6). Claims 1, 2, and 4-26 drawn to a method comprising the formula of independent claim 1 wherein **both** W6 and X6 = NR3, classified in class 548, subclass 300.1+.

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Group (7). Claims 1, 2, and 4-26 drawn to a method comprising the formula of independent claim 1 wherein $W6 = NR3$ and $X6 = \text{sulfur}$ or $W6 = \text{sulfur}$ and $X6 = NR3$ classified in class 548, subclass 146+.

Group (8). Claims 1 and 4-26 drawn to a method comprising the formula of independent claim 1 wherein $W6 = \text{oxygen}$ and $X6 = NR3$ or $W6 = NR3$ and $X6 = \text{oxygen}$, classified in class 548, subclass 215+.

Group (9). Claims 1 and 4-26 drawn to a method comprising the formula of independent claim 1 wherein $W6 = \text{oxygen}$ and $X6 = \text{sulfur}$ or $W6 = \text{sulfur}$ and $X6 = \text{oxygen}$, classified in class 548, subclass 146+.

Group (10). Claims 1, 2, and 4-26 drawn to a method comprising the formula of independent claim 1 wherein both $W6$ and $X6 = \text{sulfur}$, classified in class 548, subclass 146+.

Group (11). Claims 27-30 drawn to a method of reducing aggregation of a dye as set forth in independent claim 27 wherein the dye is other than that disclosed in formulae 1, 2, 3, and 4, classified in class 424, subclass 1.11+.

Group (12). Claims 27-31 drawn to a method to reduce aggregation of a dye comprising a dye of formula 1 wherein both $W6$ and $X6 = CR1R2$, classified in class 548, subclass 400+.

Group (13). Claims 27-31 drawn to a method to reduce aggregation of a dye comprising a dye of formula 1 wherein $W6 = CR1R2$ and $X6 = \text{oxygen}$ or $W6 = \text{oxygen}$ and $X6 = CR1R2$, classified in class 548, subclass 215+.

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Group (14). Claims 27-31 drawn to a method to reduce aggregation of a dye comprising a dye of formula 1 wherein $W6 = CR1R2$ and $X6 = NR3$ or $W6 = NR3$ and $X6 = CR1R2$, classified in class 548, subclass 300.1+.

Group (15). Claims 27-31 drawn to a method to reduce aggregation of a dye comprising a dye of formula 1 wherein $W6 = CR1R2$ and $X6 = \text{sulfur}$ or $W6 = \text{sulfur}$ and $X6 = CR1R2$, classified in class 548, subclass 146+.

Group (16). Claims 27-31 drawn to a method to reduce aggregation of a dye comprising a dye of formula 1 wherein both $W6$ and $X6 = \text{oxygen}$, classified in class 548, subclass 215+.

Group (17). Claims 27-31 drawn to a method to reduce aggregation of a dye comprising a dye of formula 1 wherein both $W6$ and $X6 = NR3$, classified in class 548, subclass 300.1+.

Group (18). Claims 27-31 drawn to a method to reduce aggregation of a dye comprising a dye of formula 1 wherein $W6 = NR3$ and $X6 = \text{sulfur}$ or $W6 = \text{sulfur}$ and $X6 = NR3$ classified in class 548, subclass 146+.

Group (19). Claims 27-31 drawn to a method to reduce aggregation of a dye comprising a dye of formula 1 wherein $W6 = \text{oxygen}$ and $X6 = NR3$ or $W6 = NR3$ and $X6 = \text{oxygen}$, classified in class 548, subclass 215+.

Group (20). Claims 27-31 drawn to a method to reduce aggregation of a dye comprising a dye of formula 1 wherein $W6 = \text{oxygen}$ and $X6 = \text{sulfur}$ or $W6 = \text{sulfur}$ and $X6 = \text{oxygen}$, classified in class 548, subclass 146+.

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Group (21). Claims 27-31 drawn to a method to reduce aggregation of a dye comprising a dye of formula 1 wherein **both** W6 and X6 = sulfur, classified in class 548, subclass 146+.

Group (22). Claims 27-31 drawn to a method to reduce aggregation of a dye of formula 2 wherein **both** W6 and X6 = CR1R2, classified in class 548, subclass 400+.

Group (23). Claims 27-31 drawn to a method to reduce aggregation of a dye of formula 2 wherein W6 = CR1R2 and X6 = oxygen or W6 = oxygen and X6 = CR1R2, classified in class 548, subclass 215+.

Group (24). Claims 27-31 drawn to a method to reduce aggregation of a dye of formula 2 wherein W6 = CR1R2 and X6 = NR3 or W6 = NR3 and X6 = CR1R2, classified in class 548, subclass 300.1+.

Group (25). Claims 27-31 drawn to a method to reduce aggregation of a dye of formula 2 wherein W6 = CR1R2 and X6 = sulfur or W6 = sulfur and X6 = CR1R2, classified in class 548, subclass 146+.

Group (26). Claims 27-31 drawn to a method to reduce aggregation of a dye of formula 2 wherein **both** W6 and X6 = oxygen, classified in class 548, subclass 215+.

Group (27). Claims 27-31 drawn to a method to reduce aggregation of a dye of formula 2 wherein **both** W6 and X6 = NR3, classified in class 548, subclass 300.1+.

Group (28). Claims 27-31 drawn to a method to reduce aggregation of a dye of formula 2 wherein W6 = NR3 and X6 = sulfur or W6 = sulfur and X6 = NR3 classified in class 548, subclass 146+.

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Group (29). Claims 27-31 drawn to a method to reduce aggregation of a dye of formula 2 wherein W6 = oxygen and X6 = NR3 or W6 = NR3 and X6 = oxygen, classified in class 548, subclass 215+.

Group (30). Claims 27-31 drawn to a method to reduce aggregation of a dye of formula 2 wherein W6 = oxygen and X6 = sulfur or W6 = sulfur and X6 = oxygen, classified in class 548, subclass 146+.

Group (31). Claims 27-31 drawn to a method to reduce aggregation of a dye of formula 2 wherein both W6 and X6 = sulfur, classified in class 548, subclass 146+.

Group (32). Claims 27-31 drawn to a method to reduce aggregation of a dye of formula 3 wherein both W6 and X6 = CR1R2, classified in class 548, subclass 400+.

Group (33). Claims 27-31 drawn to a method to reduce aggregation of a dye of formula 3 wherein W6 = CR1R2 and X6 = oxygen or W6 = oxygen and X6 = CR1R2, classified in class 548, subclass 215+.

Group (34). Claims 27-31 drawn to a method to reduce aggregation of a dye of formula 3 wherein W6 = CR1R2 and X6 = NR3 or W6 = NR3 and X6 = CR1R2, classified in class 548, subclass 300.1+.

Group (35). Claims 27-31 drawn to a method to reduce aggregation of a dye of formula 3 wherein W6 = CR1R2 and X6 = sulfur or W6 = sulfur and X6 = CR1R2, classified in class 548, subclass 146+.

Group (36). Claims 27-31 drawn to a method to reduce aggregation of a dye of formula 3 wherein both W6 and X6 = oxygen, classified in class 548, subclass 215+.

Group (37). Claims 27-31 drawn to a method to reduce aggregation of a dye of formula 3 wherein **both** W6 and X6 = NR3, classified in class 548, subclass 300.1+.

Group (38). Claims 27-31 drawn to a method to reduce aggregation of a dye of formula 3 wherein W6 = NR3 and X6 = sulfur or W6 = sulfur and X6 = NR3 classified in class 548, subclass 146+.

Group (39). Claims 27-31 drawn to a method to reduce aggregation of a dye of formula 3 wherein W6 = oxygen and X6 = NR3 or W6 = NR3 and X6 = oxygen, classified in class 548, subclass 215+.

Group (40). Claims 27-31 drawn to a method to reduce aggregation of a dye of formula 3 wherein W6 = oxygen and X6 = sulfur or W6 = sulfur and X6 = oxygen, classified in class 548, subclass 146+.

Group (41). Claims 27-31 drawn to a method to reduce aggregation of a dye of formula 3 wherein **both** W6 and X6 = sulfur, classified in class 548, subclass 146+.

Group (42). Claims 27-31 drawn to a method to reduce aggregation of dye of formula 4 wherein **both** W6 and X6 = CR1R2, classified in class 548, subclass 400+.

Group (43). Claims 27-31 drawn to a method to reduce aggregation of dye of formula 4 wherein W6 = CR1R2 and X6 = oxygen or W6 = oxygen and X6 = CR1R2, classified in class 548, subclass 215+.

Group (44). Claims 27-31 drawn to a method to reduce aggregation of dye of formula 4 wherein W6 = CR1R2 and X6 = NR3 or W6 = NR3 and X6 = CR1R2, classified in class 548, subclass 300.1+.

Group (45). Claims 27-31 drawn to a method to reduce aggregation of dye of formula 4 wherein W6 = CR1R2 and X6 = sulfur or W6 = sulfur and X6 = CR1R2, classified in class 548, subclass 146+.

Group (46). Claims 27-31 drawn to a method to reduce aggregation of dye of formula 4 wherein both W6 and X6 = oxygen, classified in class 548, subclass 215+.

Group (47). Claims 27-31 drawn to a method to reduce aggregation of dye of formula 4 wherein both W6 and X6 = NR3, classified in class 548, subclass 300.1+.

Group (48). Claims 27-31 drawn to a method to reduce aggregation of dye of formula 4 wherein W6 = NR3 and X6 = sulfur or W6 = sulfur and X6 = NR3 classified in class 548, subclass 146+.

Group (49). Claims 27-31 drawn to a method to reduce aggregation of dye of formula 4 wherein W6 = oxygen and X6 = NR3 or W6 = NR3 and X6 = oxygen, classified in class 548, subclass 215+.

Group (50). Claims 27-31 drawn to a method to reduce aggregation of dye of formula 4 wherein W6 = oxygen and X6 = sulfur or W6 = sulfur and X6 = oxygen, classified in class 548, subclass 146+.

Group (51). Claims 27-31 drawn to a method to reduce aggregation of dye of formula 4 wherein both W6 and X6 = sulfur, classified in class 548, subclass 146+.

Group (52). Claims 32-35 drawn to a method of enhancing fluorescence as set forth in independent claim 32 wherein the dye is other than that of formulae 1, 2, 3, and 4, classified in class 548, subclass 400+.

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Group (53). Claims 32-35 drawn to a method of enhancing fluorescence comprising a dye of formula 1 wherein **both** W6 and X6 = CR1R2, classified in class 548, subclass 400+.

Group (54). Claims 32-35 drawn to a method of enhancing fluorescence comprising a dye of formula 1 wherein W6 = CR1R2 and X6 = oxygen or W6 = oxygen and X6 = CR1R2, classified in class 548, subclass 215+.

Group (55). Claims 32-35 drawn to a method of enhancing fluorescence comprising a dye of formula 1 wherein W6 = CR1R2 and X6 = NR3 or W6 = NR3 and X6 = CR1R2, classified in class 548, subclass 300.1+.

Group (56). Claims 32-35 drawn to a method of enhancing fluorescence comprising a dye of formula 1 wherein W6 = CR1R2 and X6 = sulfur or W6 = sulfur and X6 = CR1R2, classified in class 548, subclass 146+.

Group (57). Claims 32-35 drawn to a method of enhancing fluorescence comprising a dye of formula 1 wherein **both** W6 and X6 = oxygen, classified in class 548, subclass 215+.

Group (58). Claims 32-35 drawn to a method of enhancing fluorescence comprising a dye of formula 1 wherein **both** W6 and X6 = NR3, classified in class 548, subclass 300.1+.

Group (59). Claims 32-35 drawn to a method of enhancing fluorescence comprising a dye of formula 1 wherein W6 = NR3 and X6 = sulfur or W6 = sulfur and X6 = NR3 classified in class 548, subclass 146+.

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Group (60). Claims 32-35 drawn to a method of enhancing fluorescence comprising a dye of formula 1 wherein W6 = oxygen and X6 = NR3 or W6 = NR3 and X6 = oxygen, classified in class 548, subclass 215+.

Group (61). Claims 32-35 drawn to a method of enhancing fluorescence comprising a dye of formula 1 wherein W6 = oxygen and X6 = sulfur or W6 = sulfur and X6 = oxygen, classified in class 548, subclass 146+.

Group (62). Claims 32-35 drawn to a method of enhancing fluorescence comprising a dye of formula 1 wherein both W6 and X6 = sulfur, classified in class 548, subclass 146+.

Group (63). Claims 32-35 drawn to a method of enhancing fluorescence of formula 2 wherein both W6 and X6 = CR1R2, classified in class 548, subclass 400+.

Group (64). Claims 32-35 drawn to a method of enhancing fluorescence of formula 2 wherein W6 = CR1R2 and X6 = oxygen or W6 = oxygen and X6 = CR1R2, classified in class 548, subclass 215+.

Group (65). Claims 32-35 drawn to a method of enhancing fluorescence of formula 2 wherein W6 = CR1R2 and X6 = NR3 or W6 = NR3 and X6 = CR1R2, classified in class 548, subclass 300.1+.

Group (66). Claims 32-35 drawn to a method of enhancing fluorescence of formula 2 wherein W6 = CR1R2 and X6 = sulfur or W6 = sulfur and X6 = CR1R2, classified in class 548, subclass 146+.

Group (67). Claims 32-35 drawn to a method of enhancing fluorescence of formula 2 wherein both W6 and X6 = oxygen, classified in class 548, subclass 215+.

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Group (68). Claims 32-35 drawn to a method of enhancing fluorescence of formula 2 wherein **both** W6 and X6 = NR3, classified in class 548, subclass 300.1+.

Group (69). Claims 32-35 drawn to a method of enhancing fluorescence of formula 2 wherein W6 = NR3 and X6 = sulfur or W6 = sulfur and X6 = NR3 classified in class 548, subclass 146+.

Group (70). Claims 32-35 drawn to a method of enhancing fluorescence of formula 2 wherein W6 = oxygen and X6 = NR3 or W6 = NR3 and X6 = oxygen, classified in class 548, subclass 215+.

Group (71). Claims 32-35 drawn to a method of enhancing fluorescence of formula 2 wherein W6 = oxygen and X6 = sulfur or W6 = sulfur and X6 = oxygen, classified in class 548, subclass 146+.

Group (72). Claims 32-35 drawn to a method of enhancing fluorescence of formula 2 wherein **both** W6 and X6 = sulfur, classified in class 548, subclass 146+.

Group (73). Claims 32-35 drawn to a method of enhancing fluorescence of formula 3 wherein **both** W6 and X6 = CR1R2, classified in class 548, subclass 400+.

Group (74). Claims 32-35 drawn to a method of enhancing fluorescence of formula 3 wherein W6 = CR1R2 and X6 = oxygen or W6 = oxygen and X6 = CR1R2, classified in class 548, subclass 215+.

Group (75). Claims 32-35 drawn to a method of enhancing fluorescence of formula 3 wherein W6 = CR1R2 and X6 = NR3 or W6 = NR3 and X6 = CR1R2, classified in class 548, subclass 300.1+.

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Group (76). Claims 32-35 drawn to a method of enhancing fluorescence of formula 3 wherein $W6 = CR1R2$ and $X6 = \text{sulfur}$ or $W6 = \text{sulfur}$ and $X6 = CR1R2$, classified in class 548, subclass 146+.

Group (77). Claims 32-35 drawn to a method of enhancing fluorescence of formula 3 wherein both $W6$ and $X6 = \text{oxygen}$, classified in class 548, subclass 215+.

Group (78). Claims 32-35 drawn to a method of enhancing fluorescence Claims 32-35 drawn to a method of enhancing fluorescence of formula 3 wherein both $W6$ and $X6 = NR3$, classified in class 548, subclass 300.1+.

Group (79). Claims 32-35 drawn to a method of enhancing fluorescence of formula 3 wherein $W6 = NR3$ and $X6 = \text{sulfur}$ or $W6 = \text{sulfur}$ and $X6 = NR3$ classified in class 548, subclass 146+.

Group (80). Claims 32-35 drawn to a method of enhancing fluorescence of formula 3 wherein $W6 = \text{oxygen}$ and $X6 = NR3$ or $W6 = NR3$ and $X6 = \text{oxygen}$, classified in class 548, subclass 215+.

Group (81). Claims 32-35 drawn to a method of enhancing fluorescence of formula 3 wherein $W6 = \text{oxygen}$ and $X6 = \text{sulfur}$ or $W6 = \text{sulfur}$ and $X6 = \text{oxygen}$, classified in class 548, subclass 146+.

Group (82). Claims 32-35 drawn to a method of enhancing fluorescence of formula 3 wherein both $W6$ and $X6 = \text{sulfur}$, classified in class 548, subclass 146+.

Group (83). Claims 32-35 drawn to a method of enhancing fluorescence of formula 4 wherein both $W6$ and $X6 = CR1R2$, classified in class 548, subclass 400+.

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Group (84). Claims 32-35 drawn to a method of enhancing fluorescence of formula 4 wherein W6 = CR1R2 and X6 = oxygen or W6 = oxygen and X6 = CR1R2, classified in class 548, subclass 215+.

Group (85). Claims 32-35 drawn to a method of enhancing fluorescence of formula 4 wherein W6 = CR1R2 and X6 = NR3 or W6 = NR3 and X6 = CR1R2, classified in class 548, subclass 300.1+.

Group (86). Claims 32-35 drawn to a method of enhancing fluorescence of formula 4 wherein W6 = CR1R2 and X6 = sulfur or W6 = sulfur and X6 = CR1R2, classified in class 548, subclass 146+.

Group (87). Claims 32-35 drawn to a method of enhancing fluorescence of formula 4 wherein both W6 and X6 = oxygen, classified in class 548, subclass 215+.

Group (88). Claims 32-35 drawn to a method of enhancing fluorescence of formula 4 wherein both W6 and X6 = NR3, classified in class 548, subclass 300.1+.

Group (89). Claims 32-35 drawn to a method of enhancing fluorescence of formula 4 wherein W6 = NR3 and X6 = sulfur or W6 = sulfur and X6 = NR3 classified in class 548, subclass 146+.

Group (90). Claims 32-35 drawn to a method of enhancing fluorescence of formula 4 wherein W6 = oxygen and X6 = NR3 or W6 = NR3 and X6 = oxygen, classified in class 548, subclass 215+.

Group (91). Claims 32-35 drawn to a method of enhancing fluorescence of formula 4 wherein W6 = oxygen and X6 = sulfur or W6 = sulfur and X6 = oxygen, classified in class 548, subclass 146+.

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Group (92). Claims 32-35 drawn to a method of enhancing fluorescence of formula 4 wherein **both** W6 and X6 = sulfur, classified in class 548, subclass 146+.

Group (93). Claims 37 and 36 drawn to a method to maintain fluorescence of a dye comprising the formula of independent claim 37 wherein **both** W6 and X6 = CR1R2, classified in class 548, subclass 400+.

Group (94). Claims 37 and 38 drawn to a method to maintain fluorescence of a dye comprising the formula of independent claim 37 wherein W6 = CR1R2 and X6 = oxygen **or** W6 = oxygen and X6 = CR1R2, classified in class 548, subclass 215+.

Group (95). Claims 37 and 38 drawn to a method to maintain fluorescence of a dye comprising the formula of independent claim 37 wherein W6 = CR1R2 and X6 = NR3 **or** W6 = NR3 and X6 = CR1R2, classified in class 548, subclass 300.1+.

Group (96). Claims 37 and 38 drawn to a method to maintain fluorescence of a dye comprising the formula of independent claim 37 wherein W6 = CR1R2 and X6 = sulfur **or** W6 = sulfur and X6 = CR1R2, classified in class 548, subclass 146+.

Group (97). Claims 37 and 38 drawn to a method to maintain fluorescence comprising the formula of independent claim 37 wherein **both** W6 and X6 = oxygen, classified in class 548, subclass 215+.

Group (98). Claims 37 and 38 drawn to a method to maintain fluorescence comprising the formula of independent claim 37 wherein **both** W6 and X6 = NR3, classified in class 548, subclass 300.1+.

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Group (99). Claims 37 and 38 drawn to a method to maintain fluorescence comprising the formula of independent claim 37 wherein W6 = NR3 and X6 = sulfur or W6 = sulfur and X6 = NR3 classified in class 548, subclass 146+.

Group (100). Claims 37 and 38 drawn to a method to maintain fluorescence comprising the formula of independent claim 37 wherein W6 = oxygen and X6 = NR3 or W6 = NR3 and X6 = oxygen, classified in class 548, subclass 215+.

Group (101). Claims 37 and 38 drawn to a method to maintain fluorescence comprising the formula of independent claim 37 wherein W6 = oxygen and X6 = sulfur or W6 = sulfur and X6 = oxygen, classified in class 548, subclass 146+.

Group (102). Claims 37 and 38 drawn to a method to maintain fluorescence comprising the formula of independent claim 37 wherein both W6 and X6 = sulfur, classified in class 548, subclass 146+.

Group (103). Claims 39 and 40 drawn to a method to maintain fluorescence of a dye comprising the formula of independent claim 39 wherein both W6 and X6 = CR1R2, classified in class 548, subclass 400+.

Group (104). Claims 39 and 40 drawn to a method to maintain fluorescence of a dye comprising the formula of independent claim 39 wherein W6 = CR1R2 and X6 = oxygen or W6 = oxygen and X6 = CR1R2, classified in class 548, subclass 215+.

Group (105). Claims 39 and 40 drawn to a method to maintain fluorescence of a dye comprising the formula of independent claim 39 wherein W6 = CR1R2 and X6 = NR3 or W6 = NR3 and X6 = CR1R2, classified in class 548, subclass 300.1+.

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Group (106). Claims 39 and 40 drawn to a method to maintain fluorescence of a dye comprising the formula of independent claim 39 wherein W6 = CR1R2 and X6 = sulfur or W6 = sulfur and X6 = CR1R2, classified in class 548, subclass 146+.

Group (107). Claims 39 and 40 drawn to a method to maintain fluorescence comprising the formula of independent claim 39 wherein both W6 and X6 = oxygen, classified in class 548, subclass 215+.

Group (108). Claims 39 and 40 drawn to a method to maintain fluorescence comprising the formula of independent claim 39 wherein both W6 and X6 = NR3, classified in class 548, subclass 300.1+.

Group (109). Claims 39 and 40 drawn to a method to maintain fluorescence comprising the formula of independent claim 39 wherein W6 = NR3 and X6 = sulfur or W6 = sulfur and X6 = NR3 classified in class 548, subclass 146+.

Group (110). Claims 39 and 40 drawn to a method to maintain fluorescence comprising the formula of independent claim 39 wherein W6 = oxygen and X6 = NR3 or W6 = NR3 and X6 = oxygen, classified in class 548, subclass 215+.

Group (111). Claims 39 and 40 drawn to a method to maintain fluorescence comprising the formula of independent claim 39 wherein W6 = oxygen and X6 = sulfur or W6 = sulfur and X6 = oxygen, classified in class 548, subclass 146+.

Group (112). Claims 39 and 40 drawn to a method to maintain fluorescence comprising the formula of independent claim 39 wherein both W6 and X6 = sulfur, classified in class 548, subclass 146+.

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Group (113). Claims 41 and 42 drawn to a method to maintain fluorescence of a dye comprising the formula of independent claim 41 wherein **both** W6 and X6 = CR1R2, classified in class 548, subclass 400+.

Group (114). Claims 41 and 42 drawn to a method to maintain fluorescence of a dye comprising the formula of independent claim 41 wherein W6 = CR1R2 and X6 = oxygen **or** W6 = oxygen and X6 = CR1R2, classified in class 548, subclass 215+.

Group (115). Claims 41 and 42 drawn to a method to maintain fluorescence of a dye comprising the formula of independent claim 41 wherein W6 = CR1R2 and X6 = NR3 **or** W6 = NR3 and X6 = CR1R2, classified in class 548, subclass 300.1+.

Group (116). Claims 41 and 42 drawn to a method to maintain fluorescence of a dye comprising the formula of independent claim 41 wherein W6 = CR1R2 and X6 = sulfur **or** W6 = sulfur and X6 = CR1R2, classified in class 548, subclass 146+.

Group (117). Claims 41 and 42 drawn to a method to maintain fluorescence comprising the formula of independent claim 41 wherein **both** W6 and X6 = oxygen, classified in class 548, subclass 215+.

Group (118). Claims 41 and 42 drawn to a method to maintain fluorescence comprising the formula of independent claim 41 wherein **both** W6 and X6 = NR3, classified in class 548, subclass 300.1+.

Group (119). Claims 41 and 42 drawn to a method to maintain fluorescence comprising the formula of independent claim 41 wherein W6 = NR3 and X6 = sulfur **or** W6 = sulfur and X6 = NR3 classified in class 548, subclass 146+.

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Group (120). Claims 41 and 42 drawn to a method to maintain fluorescence comprising the formula of independent claim 41 wherein W6 = oxygen and X6 = NR3 or W6 = NR3 and X6 = oxygen, classified in class 548, subclass 215+.

Group (121). Claims 41 and 42 drawn to a method to maintain fluorescence comprising the formula of independent claim 41 wherein W6 = oxygen and X6 = sulfur or W6 = sulfur and X6 = oxygen, classified in class 548, subclass 146+.

Group (122). Claims 41 and 42 drawn to a method to maintain fluorescence comprising the formula of independent claim 41 wherein both W6 and X6 = sulfur, classified in class 548, subclass 146+.

Group (123). Claims 43 and 44 drawn to a method to maintain fluorescence of a dye comprising the formula of independent claim 43 wherein both W6 and X6 = CR1R2, classified in class 548, subclass 400+.

Group (124). Claims 43 and 44 drawn to a method to maintain fluorescence of a dye comprising the formula of independent claim 43 wherein W6 = CR1R2 and X6 = oxygen or W6 = oxygen and X6 = CR1R2, classified in class 548, subclass 215+.

Group (125). Claims 43 and 44 drawn to a method to maintain fluorescence of a dye comprising the formula of independent claim 43 wherein W6 = CR1R2 and X6 = NR3 or W6 = NR3 and X6 = CR1R2, classified in class 548, subclass 300.1+.

Group (126). Claims 43 and 44 drawn to a method to maintain fluorescence of a dye comprising the formula of independent claim 43 wherein W6 = CR1R2 and X6 = sulfur or W6 = sulfur and X6 = CR1R2, classified in class 548, subclass 146+.

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Group (127). Claims 43 and 44 drawn to a method to maintain fluorescence comprising the formula of independent claim 43 wherein **both** W6 and X6 = oxygen, classified in class 548, subclass 215+.

Group (128). Claims 43 and 44 drawn to a method to maintain fluorescence comprising the formula of independent claim 43 wherein **both** W6 and X6 = NR3, classified in class 548, subclass 300.1+.

Group (129). Claims 43 and 44 drawn to a method to maintain fluorescence comprising the formula of independent claim 43 wherein W6 = NR3 and X6 = sulfur **or** W6 = sulfur and X6 = NR3 classified in class 548, subclass 146+.

Group (130). Claims 43 and 44 drawn to a method to maintain fluorescence comprising the formula of independent claim 43 wherein W6 = oxygen and X6 = NR3 **or** W6 = NR3 and X6 = oxygen, classified in class 548, subclass 215+.

Group (131). Claims 43 and 44 drawn to a method to maintain fluorescence comprising the formula of independent claim 43 wherein W6 = oxygen and X6 = sulfur **or** W6 = sulfur and X6 = oxygen, classified in class 548, subclass 146+.

Group (132). Claims 43 and 44 drawn to a method to maintain fluorescence comprising the formula of independent claim 43 wherein **both** W6 and X6 = sulfur, classified in class 548, subclass 146+.

Note: Claims appearing in more than one group will only be examined to the extent that they read upon the elected invention.

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2. The inventions are distinct, each from the other because of the following reasons:

Inventions (1) –(132) are unrelated. Inventions are unrelated if it can be shown that they are not disclosed as capable of use together and they have different designs, modes of operation, and effects (MPEP § 802.01 and § 806.06). In the instant case, the different inventions are distinct from one another because each Group requires structurally different compounds (Note that various formulae are utilized wherein the rings may contain various non-carbon atoms) in order to reach a desired goal (the particular method for which the compounds are being used). Thus, the methods are distinct from one another and would require a separate search of the art even though some of the groups have the same subclass.

3. Because these inventions are independent or distinct for the reasons given above and there would be a serious burden on the examiner if restriction is not required because the inventions have acquired a separate status in the art due to their recognized divergent subject matter, restriction for examination purposes as indicated is proper.

ELECTION OF SPECIES

4. Claims 1-44 are generic to the following disclosed patentably distinct species. In particular, the methods are directed to various formulae where the compounds utilized are structurally different. For example, one may have a method comprising Formula 4 wherein the variables W6 and X6 vary from CR1R2, O, NR3, and S. Applicant is

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required under 35 U.S.C. 121 to elect a single disclosed species, even though this requirement is traversed. Applicant is advised that a reply to this requirement must include an identification of the species that is elected consonant with this requirement, and a listing of all claims readable thereon, including any claims subsequently added. An argument that a claim is allowable or that all claims are generic is considered nonresponsive unless accompanied by an election.

Upon the allowance of a generic claim, applicant will be entitled to consideration of claims to additional species which depend from or otherwise require all the limitations of an allowable generic claim as provided by 37 CFR 1.141. If claims are added after the election, applicant must indicate which are readable upon the elected species.

MPEP § 809.02(a).

Applicant is respectfully requested to elect a single disclosed species from within the elected group above. The species should identify each of the variables associated with the compound. In addition, Applicant should identify the diagnostic or therapeutic procedure, the biocompatible organic solvent, and the imaging procedure.

5. Due to the complexity of the restriction, a request of an oral election to the above restriction requirement was not made.

6. *Applicant is advised that the reply to this requirement to be complete must include (i) an election of a species or invention to be examined even though the*

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requirement be traversed (37 CFR 1.143) and (ii) identification of the claims encompassing the elected invention.

7. The election of an invention or species may be made with or without traverse. To reserve a right to petition, the election must be made with traverse. If the reply does not distinctly and specifically point out supposed errors in the restriction requirement, the election shall be treated as an election without traverse.

8. Should applicant traverse on the ground that the inventions or species are not patentably distinct, applicant should submit evidence or identify such evidence now of record showing the inventions or species to be obvious variants or clearly admit on the record that this is the case. In either instance, if the examiner finds one of the inventions unpatentable over the prior art, the evidence or admission may be used in a rejection under 35 U.S.C.103(a) of the other invention.

9. Applicant is reminded that upon the cancellation of claims to a non-elected invention, the inventorship must be amended in compliance with 37 CFR 1.48(b) if one or more of the currently named inventors is no longer an inventor of at least one claim remaining in the application. Any amendment of inventorship must be accompanied by a request under 37 CFR 1.48(b) and by the fee required under 37 CFR 1.17(i).

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10. Any inquiry concerning this communication or earlier communications from the examiner should be directed to D. L. Jones whose telephone number is (571) 272-0617. The examiner can normally be reached on Mon.-Fri., 6:45 a.m. - 3:15 p.m..

If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, Michael Hartley can be reached on (571) 272-0616. The fax phone number for the organization where this application or proceeding is assigned is 571-273-8300.

Information regarding the status of an application may be obtained from the Patent Application Information Retrieval (PAIR) system. Status information for published applications may be obtained from either Private PAIR or Public PAIR. Status information for unpublished applications is available through Private PAIR only. For more information about the PAIR system, see <http://pair-direct.uspto.gov>. Should you have questions on access to the Private PAIR system, contact the Electronic Business Center (EBC) at 866-217-9197 (toll-free). If you would like assistance from a USPTO Customer Service Representative or access to the automated information system, call 800-786-9199 (IN USA OR CANADA) or 571-272-1000.

A handwritten signature in black ink, appearing to read 'D. L. Jones', with a stylized flourish extending to the right.

D. L. Jones
Primary Examiner
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February 2, 2007